UNITED STATES DISTRICT COURT

WESTERN DISTRICT OF WISCONSIN

NATIONAL WILDLIFE REFUGE ASSOCIATION, et al, Plaintiffs, v. RURAL UTILITIES SERVICE, et al. Federal Defendants, AMERICAN TRANSMISSION COMPANY, LLC, et al. Intervenor-Defendants.	No. 3:21-cv-00096-wmc
NATIONAL WILDLIFE REFUGE ASSOCIATION, et al, Plaintiffs, v. UNITED STATES ARMY CORPS OF ENGINEERS, et al., Federal Defendants. AMERICAN TRANSMISSION COMPANY, LLC, et al. Intervenor-Defendants.	No. 3:21-cv-000306-wmc

DECLARATION OF TOM DAGENAIS IN SUPPORT OF OPPOSITION TO PLAINTIFFS' MOTION FOR INJUNCTION PENDING APPEAL

I, Tom Dagenais, declare as follows:

1. I have personal knowledge of the facts and information stated herein and, if called as a witness, I could and would testify competently thereto.

2. I am employed by ATC Management, Inc., the corporate manager of American Transmission Company LLC (collectively, "ATC"). My job title is Director of Renewable

Integration, which I was recently promoted to in January of 2022. Previously, I held several related roles, such as the Manager of Reliability Planning. My business address is 2489 Rinden Road, Cottage Grove, Wisconsin.

3. I have worked at ATC since 2004, when I was hired as a Transmission Planning Engineer, and over time have been promoted to my current position. In the last few years, my job duties have typically included leading project planning teams in evaluating potential transmission system solutions for constraints on the system and participating in cross-functional project development teams for projects that are proposed for construction. I have performed or directed efforts on the economic analyses of numerous potential projects using the PROMOD software package.

4. Prior to working at ATC, I spent two years working at the Midwest Independent System Operator (now known as the Midcontinent Independent System Operator ("MISO")) as a reliability coordinator. My duties included evaluating transmission system reliability, forecasting transmission congestion, and preventing and resolving transmission system problems. Prior to MISO, I spent several years working at the Mid-America Interconnected Network (a former regional reliability organization) monitoring and analyzing bulk power system security, performing contingency analyses, and implementing line-loading relief as necessary.

5. I have a Bachelor of Science Degree in Electrical Engineering from the University of Illinois in Urbana-Champaign, and a Master of Business Administration Degree from the University of Wisconsin at Madison. I am registered as a Professional Engineer with the State of Wisconsin.

6. My responsibilities at ATC include directing and guiding the efforts of two teams of transmission planning engineers and providing leadership in support of ATC's efforts to reliably and cost-effectively plan, design, build, own, and operate the electrical transmission system. My

duties include providing guidance, vision, and direction on planning studies for projects under consideration in ATC's System Planning Department.

7. I am the lead transmission planner for the Cardinal-Hickory Creek 345-kilovolt ("kV") Transmission Line Project ("Project") for both ATC and the Project's other co-owners, ITC Midwest LLC ("ITC Midwest") and Dairyland Power Cooperative ("Dairyland") (ATC, ITC, and Dairyland, collectively, "the Co-owners"). Among other responsibilities, in this role I oversaw a team of planners that studied the need for the Project in Wisconsin, worked cooperatively with the other Co-owners in studying the need for the Project, oversaw the preparation of the application for a Certificate of Public Convenience and Necessity ("CPCN") that the Co-owners submitted to the Public Service Commission of Wisconsin ("Commission" or "PSCW") in April 2018 for the Project, and testified in support of that application before the PSCW.

8. I previously filed a declaration in this case on October 18, 2021, in support of the Co-owners' opposition to Plaintiffs' motion for a temporary injunction. (ECF No. 137) As I explained at that time, enjoining construction of the Project—even on a temporary basis—would have potentially devastating impacts on the cost-effective and reliable operation of the bulk electric power system. It would also stymie state and regional efforts to reduce carbon dioxide emissions, adversely impact the thousands of megawatts of renewable generation that are conditioned on the Project, and generally undermine the transition toward a future with more renewable energy.

9. Since I filed my declaration in October 2021, there have been several developments that reinforce the need for this Project to be placed in-service by December 2023. These developments include an increase in renewable generation being conditioned on the Project, the results of MISO's Planning Resource Auction for the 2022-23 Planning Year, and the release of the North American Electric Reliability Corporation's ("NERC") 2022 Summer Reliability Assessment. I will address each of these items in turn.

Conditional Generators

10. First, since October—a span of slightly more than six months—the total amount of renewable generation conditioned on the Project has increased by more than 2,000 megawatts ("MW"), as shown in the table below. A map displaying the general location of these conditional generators is attached hereto as **Exhibit A**.[1] Until the Project is placed into service, these generators will be subject to quarterly studies, the results of which could curtail or limit their output onto the grid.

Table 1: Generators Explicitly Conditioned on the Construction of the Cardinal-Hickory Creek Project

Interconnection Study Phase[2]	Renewables		All Fuel Types	
	# Requests	MW	# Requests	MW
With Signed GIA	40	7,156	43	7,517
Phase 3	52	7,893	54	7,997
Phase 2	35	4,365	35	4,365
Total	**127**	**19,415**	**132**	**19,880**

1. Renewables include Fuel Type = Wind, Solar, Battery Storage, Hybrid, and Hydro.
2. All data is based on a review of https://www.misoenergy.org/planning/generator-interconnection/GI_Queue/gi-interactive-queue/# and associated GIAs on 4/11/2022.

11. Moreover, because the Project is an approved Multi-Value Project, it is cost-shared across the MISO footprint, which means that the generators conditioned on the Project do not need to pay for it, reducing their overall interconnection costs. If the Project is not built as planned, MISO would have to restudy all generating units whose interconnection is conditioned on the

[1] An interactive version of this map is also publicly available at https://atcllc.maps.arcgis.com/apps/dashboards/99a0e0673c984c1ba122f8e41dd63d51.

[2] Not all proposed generators that go through MISO's interconnection process end up being built—some withdraw from the interconnection queue before the process is completed, for a variety of reasons (financial, land control, regulatory, etc.). However, the generating units reflected in this table are in the most advanced stages of the interconnection process. The generators with signed generator interconnection agreements ("GIA") have essentially completed the interconnection process and are either currently operating or very close to it. The generators in Phase 2 or Phase 3 are in an advanced stage the interconnection process and have made substantial financial commitments to interconnect to the system, making it more likely that they will be constructed, but are subject to further study from MISO. (*See* Dkt. 137, at 21–22) (describing MISO's interconnection process).

Project. This would significantly delay interconnection studies for the thousands of megawatts of generators that are currently in the interconnection queue, as it would likely take MISO multiple years to re-do prior studies, identify transmission upgrades that would be required in lieu of the Project, and allocate the costs of those transmission upgrade projects across the interconnecting generating units.

12. MISO's re-study process would identify alternative transmission upgrades that would be needed in lieu of the Project, requiring it to amend or renegotiate existing generator interconnection agreements ("GIAs") and allocate the costs of those upgrades across conditional generators. This could render uneconomic generators that have already started operating or force generators currently being studied to cancel their projects.

The MISO Planning Resource Auction and NERC Summer Assessment

13. As the FERC-approved regional transmission organization for a large swath of the Midwest, one of MISO's key functions is to ensure that there is enough electric generating capacity to reliably meet peak demand. In other words, one of MISO's most important responsibilities is ensuring that there are enough power plants running when demand for electricity is at its highest, which for much of the country typically occurs during the summer months. MISO refers to this as its resource adequacy construct.

14. One tool that MISO uses to maintain resource adequacy is known as the Planning Reserve Margin Requirement ("PRMR"). The PRMR is the percentage by which installed generating capacity exceeds expected peak demand—that is, the amount of generation that must be kept in reserve, over and above expected peak demand, to maintain reliability across the bulk electric power system.

15. MISO establishes the PRMR on an annual basis before each planning year, which

run from June 1 to May 30. Each load-serving entity ("LSE")[3] within MISO is responsible for meeting the PRMR each planning year. LSEs can meet this obligation in several ways, the most obvious of which is to own generating resources that MISO will credit against the PRMR. Traditional, fossil-fuel fired resources receive the highest accreditation rate because (unless they are offline, for example, due to maintenance) they can generally be called upon at any time to meet load. Renewable resources like wind and solar receive less accreditation because they are inherently variable in nature—they need the sun to shine or the wind to blow to generate power and are therefore not as "firm" as conventional generation.

16. In addition to owning their own generation, LSEs can meet the PRMR by participating in MISO's annual Planning Resource Auction ("PRA"). The PRA is a voluntary auction conducted every April, before the beginning of the next resource planning year. It is a sealed bid auction in which market participants can either offer rights to their own generation, bid to purchase rights associated with other generation, or both, to meet the PRMR for the next planning year. Based on these offers and bids, MISO sets an auction clearing price for generating capacity in each of the ten local resource zones across the MISO footprint.

17. In the auction that MISO conducted this past April, the clearing price for generating capacity for local resource zones 1 through 7—which covers the upper and central Midwest, including North Dakota, Minnesota, Iowa, and Wisconsin (often referred to as "MISO North") and Illinois, Indiana, and Michigan (often referred to as "MISO Central")—reached the highest price it could possibly reach, which is known as the "cost of new entry." This price reflects the amount it would cost an LSE to construct a new generating resource to meet its resource adequacy requirements; in other words, based on the auction results, it would be as or more cost-effective for

[3] A load-serving entity is an electric utility that provides electric service to retail customers. Madison Gas and Electric Company and Wisconsin Power and Light Company are examples of LSEs that provide retail electric service in Wisconsin.

an LSE to simply build a new power plant rather than purchase capacity rights through the auction.

18. MISO has been holding the PRA every year for almost a decade and the auction clearing price has never reached "cost of new entry." These unprecedented results are partly due to a significant shortfall of generating capacity in the MISO Central region: even though LSEs in this region are projected to import over 3,000 megawatts of generating capacity from other regions, they still could not meet the PRMR. This capacity shortfall indicates that LSEs in the MISO North and Central regions have an increased risk of needing to implement what is referred to as "temporary load shedding" during summer peak hours, which is essentially a temporary, controlled brownout to prevent larger cascading blackouts across the system.

19. After the results of the PRA were announced, NERC[4] released its 2022 Summer Reliability Assessment, which assesses whether electric generating and transmission resources can meet projected summer peak demand in various regions across the country. The assessment noted that the MISO North/Central regions cleared too little capacity in the recent planning auction and concluded that those regions could experience higher operating risks during peak summer conditions, including the potential for load shedding.

20. These developments only reinforce the need for the Cardinal - Hickory Creek Project to be constructed and placed in-service in a timely manner and without further delay. Over the last several years, thousands of megawatts of coal and nuclear generation have been retired in the MISO North and Central regions, with additional retirements coming in the near future. *See* Dkt. 137, at 20–21. These retirements have led to a shortfall in generating capacity, as illustrated by the recent auction results and the NERC summer assessment. As a result, there may not be enough energy to reliably serve demand during peak summer hours. The Project will be part of the

[4] NERC is a not-for-profit, international regulatory authority that is subject to FERC oversight and develops and enforces minimum standards for maintaining reliability on the bulk electric system. It was formed in the late 1960s in response to an infamous blackout that left much of Ontario and the Northeastern United States without power for about 13 hours.

solution to this issue by allowing for increased transfer of renewable energy from areas west of the Mississippi to demand centers in Wisconsin and other points east, especially during peak hours when demand is high.

21. In addition to providing relief during summer peak hours, the Cardinal-Hickory Creek Project will provide more system flexibility during other extreme conditions, such as the MISO cold weather event of February 2021.[5] During this event, MISO declared a system emergency. With grid stability in danger and no capability to import power from other regions, MISO operators were forced to direct member utilities to curtail 700 MW of load (meaning utilities had to forcibly reduce electricity use by their customers by cutting off their electric service) to avoid widespread cascading outages. During events such as this, transfer capability to allow for the import of power is critical to providing flexible solutions to meet resource adequacy needs. The Project would further this objective by increasing transfer capability between Wisconsin and Iowa by approximately 1,300 MW.

22. In this specific example, the Quad City – Rock Creek 345-kV line[6] was constrained for 68 hours in the MISO day ahead market and for 33 five-minute intervals in the real time market, reaching a maximum shadow price of $2,000.[7] The shadow price of a constraint represents the savings that could be captured in the market if the constraint is relieved by a single MW. As a parallel transmission path to the Quad City – Rock Creek 345-kV line, the Project could relieve the constraint on this line during extreme weather events, thereby reducing wholesale power costs and

[5] *See* MISO: Reliability Subcommittee, *Overview of February 2021 Arctic Weather* (Apr. 1, 2021), *available at* https://cdn.misoenergy.org/20210401%20RSC%20Item%2007%20Arctic%20Weather%20Event536038.pdf.

[6] This line is an approximately five-mile long 345-kV line running between the Quad Cities Nuclear Generating Station in Cordova, Illinois and the Rock Creek 345-kV line in Camanche, Iowa.

[7] A "constraint" on a transmission line refers to a situation in which electricity is dispatched onto the grid in a manner that results in the line being operated at its limit if the worst single contingency (e.g., an outage on another element of the transmission system, such as a substation or another transmission line) occurs.

improving the flexibility and reliability of the system during such events. From this perspective, the Project is an important part of the solution to system emergencies such as the February 2021 MISO cold weather event.

23. Further, the Project will simplify active operating guides by eliminating restrictions on various solar plants during certain operating conditions, further addressing resource adequacy concerns. When forced and scheduled outages occur on transmission lines in southwestern Wisconsin, certain solar generators are required to limit their output to maintain reliability on the transmission system. The Project will provide additional reliability that will remove the need for most of these restrictions, which allows for full output from these solar plants during these outages. This will both improve system reliability and increase the availability of low-cost, renewable power to consumers.

Pursuant to 28 U.S.C. § 1746, I declare under penalty of perjury, under the laws of the United States, that the foregoing is true and correct to the best of my knowledge.

Executed within the United States this 9th day of June, 2022

s/ Thomas J. Dagenais

Thomas J. Dagenais